



Operating instructions  
Vibration sensor  
**VSM101**

**UK**

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# 1 Preliminary note

Technical data, approvals, accessories and further information at [www.ifm.com](http://www.ifm.com).

## 1.1 Symbols used

- Instruction
- > Reaction, result
- [...] Designation of keys, buttons or indications
- Cross-reference
-  Important note
-  Non-compliance may result in malfunction or interference.
-  Information
-  Supplementary note

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## 2 Safety instructions

- The device described is a subcomponent for integration into a system.
  - The manufacturer is responsible for the safety of the system.
  - The system manufacturer undertakes to perform a risk assessment and to create a documentation in accordance with legal and normative requirements to be provided to the operator and user of the system. This documentation must contain all necessary information and safety instructions for the operator, the user and, if applicable, for any service personnel authorised by the manufacturer of the system.
- Read this document before setting up the product and keep it during the entire service life.
- The product must be suitable for the corresponding applications and environmental conditions without any restrictions.
- Only use the product for its intended purpose (→ Functions and features).
- If the operating instructions or the technical data are not adhered to, personal injury and/or damage to property may occur.
- The manufacturer assumes no liability or warranty for any consequences caused by tampering with the product or incorrect use by the operator.
- Installation, electrical connection, set-up, operation and maintenance of the product must be carried out by qualified personnel authorised by the machine operator.

- Protect units and cables against damage.

### 3 Functions and features

- 3-axis accelerometer
- Vibration detection of machines and equipment
- For connection to the diagnostic unit VSExxx or to another IEPE compatible evaluation unit

### 4 Electrical connection



The unit must be connected by a qualified electrician.

- ▶ Disconnect power.
- ▶ Connect the unit.

Wiring	1: BN brown: IEPE X 2: WH white: IEPE Z 3: BU blue: GND 4: BK black: self-test 5: GY grey: IEPE Y 6: YE yellow: screen
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- ▶ For connection to an ifm VSE unit connect the blue, white and black wires to a common input. Connect the brown and grey wires to separate inputs.

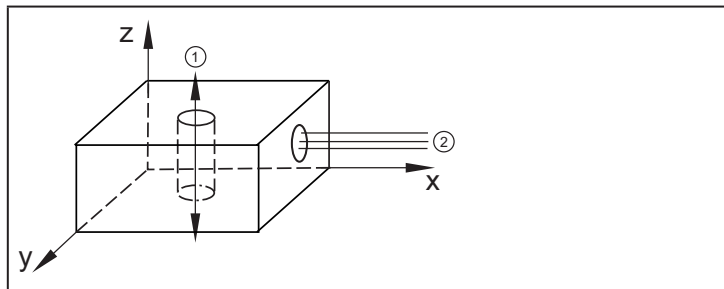


The unit has an IEPE connection.

- ▶ Apply a current of 4...6 mA for all axes.

## 4.1 Axis orientation

The z axis corresponds to the screwing direction.

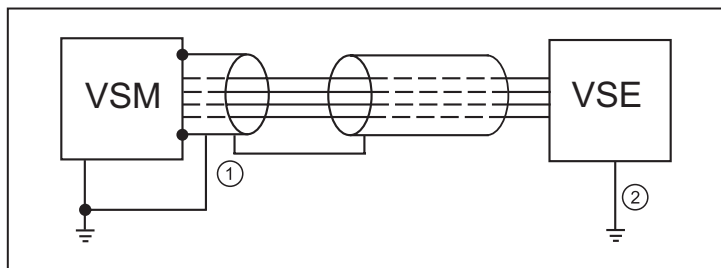


- 1: Installation direction
- 2: Cable connection

## 4.2 Use of a screened cable

- Use a screened cable to avoid conducted interference.
- Ground the screened cable on the sensor side.

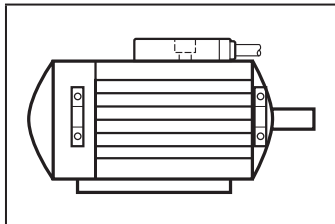
For units with cable, the screen is connected to the sensor housing.



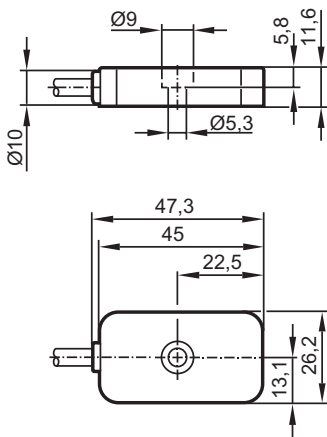
- 1: Screen
- 2: DIN rail

## 5 Installation

- ▶ Mount only in a thick housing wall close to the bearing or at the end shield.
  - ▶ Place the sensor flat on the housing.
  - ▶ Ensure a correct signal direction.
  - ▶ Ensure a safe vibration transmission and allow no elastic intermediate layers.
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- ▶ Tighten the sensor with a tightening torque of 3.5 Nm.
  - ▶ For fixing, use a screw retaining compound.



## 6 Scale drawing



## 7 Maintenance, repair and disposal

The operation of the unit is maintenance-free. After use dispose of the unit in an environmentally friendly way in accordance with the applicable national regulations.